



**PACIFIC SOILS ENGINEERING, INC.**

10653 PROGRESS WAY, P.O. BOX 2249, CYPRESS, CALIFORNIA 90630

TELEPHONE: (714) 220-0770, FAX: (714) 220-9589

(Corporate Headquarters)

*no real.*

**THE RUSSELL COMPANY**

13121 Mindanao Way, Suite 4

Marina Del Rey, CA 90292

December 18, 1995

Dear Mike:

Please find enclosed herein, a cost estimate for our preliminary geotechnical investigation concerning the proposed development at the McDonnell Douglas Corporation Plant site in the City of Los Angeles.

Pacific Soils Engineering, Inc., has had the opportunity of working on similar redevelopment sites including Lockheed Martin's Rye Canyon Development Site, Santa Clarita, Hughes Aircraft Company Facility, Fullerton; and the Ford-Loral site in Newport Beach.

The Lockheed Martin Rye Canyon Site involved an extensive subsurface geotechnical investigation in concert with the designated environmental firm's Phase I investigation. The presence of similar building facilities and mode of investigation can be compared to the McDonnell Douglas site. In addition, our work on the Ford-Loral site is now in the preliminary stages of demolition and remediation, including substantial stockpiling and use of recycled building materials.

We are confident that our familiarity with demolition and recycling in support of redevelopment of these previous industrial use sites will be an invaluable asset on the subject site.

We look forward to working with you on this project.

Respectfully submitted,  
PACIFIC SOILS ENGINEERING, INC.

By: \_\_\_\_\_

*David H. Ginter*

DAVID H. GINTER

Engineering Geology Associate

LOS ANGELES COUNTY  
TEL: (310) 325-7272 or (213) 775-6771  
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BOE-C6-0096291



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*(Corporate Headquarters)*

**McDonnell Douglas Corporation**  
**c/o THE RUSSELL COMPANY**  
13121 Mindanao Way, Suite 4  
Marina Del Rey, CA 90292

December 18, 1995

Proposal No.: 95-01-183

Attention: Mr. Mike Russell

Subject: **COST ESTIMATE**  
For Providing a Preliminary Geotechnical Investigation  
of the 170 Acre Portion of the  
McDonnell Douglas Corporation Plant Site  
Southwest of the Intersection of 190th Street & Normandy Avenue  
CITY OF LOS ANGELES, CALIFORNIA

Gentlemen:

Pursuant to your request, this firm is pleased to present a cost estimate for geotechnical services regarding a preliminary geotechnical investigation of the subject site. The data obtained during this investigation are to be utilized by the designated design civil engineer to prepare various grading plan schemes and design future street improvements.

Pacific Soils Engineering, Inc., has been involved with numerous development projects in the immediate vicinity of the subject site, including the adjacent commercial development site for Cabot, Cabot & Forbes, various subsurface investigations for the County of Los Angeles Sanitation District, as well as other nearby residential and commercial property. The knowledge and data obtained from nearby investigations by this firm will be instrumental and augment the geotechnical data for the subject site.

The initial phase of our investigation is outlined herein and will include excavation of approximately 16 borings, conducting laboratory testing to define engineering characteristics of the site soils and analysis of the field and laboratory data in consideration of proposed redevelopment schemes. Regional and local geology and lithologic units will be defined and, in combination with engineering characteristics, will be used to form the basis for preliminary recommendations relative to site demolition, recycling of materials, grading design and foundation design.

It is our understanding that the environmental assessment reports pertaining to the presence and/or absence of contaminated soils per EPA guidelines will be performed by other consultants and the site will be characterized prior to our subsurface investigation. At this time, however, we propose to utilize an Organic Vapor Analyzer (OVA) during drilling operations to measure the organic vapor level in spoils from borings. If evidence of contamination is revealed, your firm and the McDonnell Douglas Corporation will be notified promptly. Such contamination will require special

December 12, 1995

Page 2

Proposal No.: 95-1-183 - McDonnell Douglas Corp.  
c/o The Russell Company

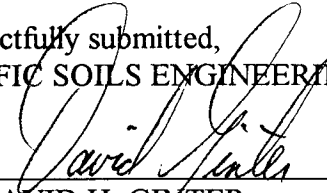
handling, storage and testing per EPA guidelines and will increase drilling costs. If contaminants are present, we would therefore expect guidance from your environmental consultant regarding locations of contaminated areas, kind of contamination and recommendations for handling of same. Consequently, additional costs for the field investigation, including possibly re-siting borings and handling of contaminated soils and laboratory testing of contaminated soils will be necessary. The cost breakdown of these additional costs are attached.

Our estimate of costs for providing these services is \$22,352.00 for non-contaminated soils, and \$37,295.00 for contaminated soils. We emphasize that projected increased costs relative to contamination cannot be accurately forecast until the environmental consultant characterizes the site, as approved by the regulators, but our anticipated costs represent a reasonable planning estimate. A cost breakdown for these services is attached with this transmittal. We anticipate approximately 25 working days will be required to complete the work outlined in this proposal, although preliminary information can be provided verbally as it is generated.

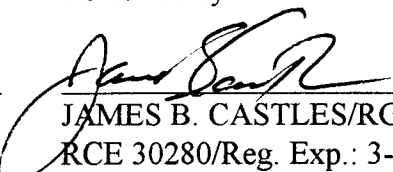
The proposed scope of work would be of sufficient detail to provide design recommendations for preliminary siting and preparation of Tentative Maps. Additional analyses and plan review will be required in the future in support of specific grading plan submittals.

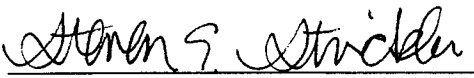
If you have any questions, or require modifications to this estimate, please feel free to contact the undersigned at our Corporate Headquarters in Cypress.

Respectfully submitted,  
PACIFIC SOILS ENGINEERING, INC.

By:   
DAVID H. GINTER  
Engineering Geology Associate

Reviewed by:

  
JAMES B. CASTLES/RGE 192  
RCE 30280/Reg. Exp.: 3-31-96  
Chief Operations Officer

By:   
STEVEN E. STRICKLER, RGE 2265  
RCE 43021/Reg. Expires 3/31/96

Authorized By: \_\_\_\_\_

Date: \_\_\_\_\_

Distr.: (1) Addressee  
DHG/SES/JBC:cp-95-1-183

PACIFIC SOILS ENGINEERING, INC.

BOE-C6-0096293

**COST ESTIMATE**

**I. Field Investigation**

Drill Rig	48 hrs. @ \$ 155.00/hr.	\$ 7,440.00
Engineering Geologist	48 hrs. @ \$ 65.00/hr.	\$ 3,120.00
Field Vehicle	48 hrs. @ \$ 5.00/hr.	\$ 240.00
Organic Vapor Analyzer		\$ 720.00
	Subtotal:	\$ 11,520.00

**II. Laboratory Testing**

Max. Dry Density/Optimum Moisture	3 tests @ \$ 92.00/test	\$ 276.00
In-situ Moisture and Density	100 tests @ \$ 11.50/test	\$ 1,150.00
Direct Shear Tests	5 tests @ \$ 92.00/test	\$ 460.00
Consolidation Tests	15 tests @ \$ 92.00/test	\$ 1,380.00
Expansion Index	4 tests @ \$ 69.00/test	\$ 276.00
Hydrometer Analyses	20 tests @ \$ 34.50/test	\$ 690.00
Classification (Sieve Analyses)	10 tests @ \$ 46.00/test	\$ 460.00
Chemical (pH, Resistivity, Chlorites, Sulfates)		\$ 400.00
	Subtotal:	\$ 5,092.00

**III. Report Compilation**

Engineering Geologist	40 hrs. @ \$ 65.00/hr.	\$ 2,600.00
Principal Geologist	4 hrs. @ \$ 80.00/hr.	\$ 320.00
Geotechnical Engineering	20 hrs. @ \$ 75.00/hr.	\$ 1,500.00
Principal Engineer	4 hrs. @ \$ 80.00/hr.	\$ 320.00
Drafting/Blueprinting/Typing, etc.		\$ 1,000.00
	Subtotal:	\$ 5,740.00

**Cost Summary for Non-Contaminated Soils**

I. Field Investigation	\$ 11,520.00
II. Laboratory Testing	\$ 5,092.00
III. Report	\$ 5,740.00
Grand Total:	\$ 22,352.00

**COST ESTIMATE**

(continued)

**IV. Handling of Potentially Contaminated Soils From Borings**

Anticipated 800±ft. of Borings                      800 ft. @ \$ 21.00/per ft.    \$ 16,800.00

\* **NOTE:** This unit price of \$21.00 per foot includes the purchase of the 55 gal. drums; filling the drums with the spoils; and transporting to a location for storage on-site; drilling an 8 inch diameter hole; logging by an engineering geologist; and backfilling each hole with grout. This price does not include testing of contaminated soils placed in drums by a State Certified Laboratory for Benzene, Toluene and Xylene (BTX) test per EPA guideline 8020 and total Petroleum Hydrocarbon (TPH) test per EPA guideline 418.1

Field Vehicle    48 hrs. @ \$ 5.00/hr.                      \$ 240.00  
Subtotal:    \$ 17,040.00

**V. Laboratory Testing of Contaminated Soils**

Max. Dry Density/Optimum Moisture	3 tests @ \$ 280.00/test	\$ 840.00
In-Situ Moisture and Density	100 tests @ \$ 26.00/test	\$ 2,600.00
Direct Shear Tests	5 tests @ \$ 267.00/test	\$ 1,335.00
Consolidation Tests	15 tests @ \$ 380.00/test	\$ 5,700.00
Expansion Index	4 tests @ \$ 200.00/test	\$ 800.00
Hydrometer Analyses	20 tests @ \$ 94.00/test	\$ 1,880.00
Classification (Sieve Analyses)	10 tests @ \$ 66.00/test	\$ 660.00
Chemical (pH, Resistivity, Chlorites, Sulfates)		\$ 700.00
	Subtotal:	\$ 14,515.00

**Cost Summary for Contaminated Soils**

IV. Field Investigation	\$ 17,040.00
V. Laboratory Testing	\$ 14,515.00
III. Report	\$ 5,740.00
<b>Grand Total:</b>	<b>\$ 37,295.00</b>

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**SAN DIEGO COUNTY OFFICE**

(619) 560-1713

FAX: (619) 560-0380

**FEE SCHEDULE FOR SERVICES RENDERED**

(EFFECTIVE APRIL 30, 1990)

Principals (consultations)	\$ 90.00/hr.
Project Engineers and Geologists	\$ 80.00/hr.
Civil Engineers & Engineering Geologists (registered)	\$ 75.00/hr.
Civil Engineering & Engineering Geology Associates	\$ 65.00/hr.
Senior Soils Technicians	\$ 50.00/hr.
Civil Engineering & Engineering Geology Assistants	\$ 55.00/hr.
Soils Technicians & Laboratory Technicians	\$ 46.00/hr.
Drafting Personnel	\$ 44.00/hr.
Expert Witness (Research)	\$ 600.00-1/2 day
Expert Witness (Testimony)	\$ 1,200.00/day

**LABORATORY**

1) Lab. Max. Density	\$ 92.00	13) Atterberg Limits	\$ 92.00
2) Direct Shear	\$ 92.00	Atterberg Limits with	
3) Swell Test	\$ 23.00	Shrinkage Limits	\$ 138.00
4) Hydrometer	\$ 34.50	14) Permeability	Quote
5) Sieve	\$ 46.00	15) "R"-Value	\$ 299.00
6) Full Gradation	\$ 92.00	16) Moisture & Density	\$ 11.50
7) Sand Equivalent	\$ 46.00	Moisture Only	\$ 11.50
8) Consolidation	\$ 92.00	Density Only (rock or	
9) Unconfined Compression		(chunk samples)	\$ 46.00
(Soil)	\$ 46.00	17) Concrete Testing **	
(Rock)	\$ 92.00	18) Ring Pressed for	
10) Triaxial Shear - -Time Only		Moisture & Density	\$ 11.50
11) C.B.R.	\$ 207.00 *	19) A.S.C.E. Swell Index	\$ 69.00
12) Specific Gravity	\$ 46.00	20) Durability Index	\$ 138.00

**THE FOLLOWING CHARGES WILL APPLY IN ADDITION TO THE ABOVE:**

- (a) Equipment Rental
- (b) Blueprints/Reproduction/Reports
- (c) Per Diem and Travel Expenses on Out-of-Town Jobs
- (d) Field Vehicles (\$5.00 per hour)
- (e) Nuclear Gauge Equipment (when used) -- (\$5.00 per hour)

\* includes 5-layer laboratory maximum density

\*\* per contract agreement

FS-1 (11-3-92)-CYP